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Original

SALPINGITIS.*

BY FRANCIS CARROLL, M. D., BOSTON.

Salpingitis has been presented with thoroughness and vigor by eminent gynecologists, their knowledge diffused and their principles intelligently applied. So that in treatment of the subject under discussion the paper has endeavored to cull the most important and salient features, purposing to avoid the identity of structure of the fallopian tubes and uterus and confine itself to presentation of essentials.

Case 1.—Patient age 37, brunette, married, mother of two children, no miscarriages, comfortably situated in life, habits beyond reproach, woman pallid and emaciated, headaches periodic and violent, constipation an associate, spirits depressed. There is a harmony in her discord, for dark and melancholy forebodings cross her path the whole gamut of a "Hysterical Symposium" is in order, followed by nausea, vomiting and purging; a copious flow of urine, dyspnea and precordial distress. Heart was believed to be affected. Stomach was believed to be dyspeptic. Then from ex-

posure to inclemency of the weather came menorrhagia, metritis and intense pain, more or less continuous in left iliac fossa, with mucous discharges during intervals of flow, pain extending down anterior portion of left thigh and leg. Examination revealed metritis, great tenderness over uterine fundus, tenderness of left tube, sensitiveness of left ovary and acute catarrhal salpingitis.

Case 2.—Operated on by Dr. Albert Tuttle. Following history obtained December 30, 1897: Patient aged 38, married, 17 years ago had miscarriage and 13 years ago had pain in left side of abdomen, operation performed, but could not remove tumor; had to wear tube in wound to drain off pus. Six months after operation was operated upon again for accumulation of pus. Eighteen months later another operation was performed for ventral hernia. Since then has felt well. Menstruates every two weeks since last operation. Flows for two or three days, no pain after first day. One period the flow will be light in color, next time dark and clotted. Does

*Read before the Gynecological Society of Boston, Feb. 10, '98.

not seem to lose strength by menstruating so often. Has been well till about two weeks ago, when she was taken with severe pains on both sides—ovarian—more marked on right, and pains in back. Bowels very constipated, very sore; seemed impossible to have them move. Pain same as in former years and intense. Patient lost a great deal of flesh. Urinates often. Profuse perspiration about 3 A. M. every day. Examination of urine: No albumen, sp. gr. 1012 deg. Operation abdominal, performed by Dr. A. Tuttle January 1, 1898. Operation very difficult on account of former replaced hernia having become encapsulated and adherent to omentum and peritoneum, offering a serious obstacle to advance of surgeon. The same being dissected away and pushed aside a pus tube and cystic ovary were removed. Operation a success. Complete recovery. Patient discharged well.

Salpingitis is inflammation of fallopian tubes. Acute catarrhal, acute purulent and seated in mucous membrane or chronic interstitial, located in muscular coat. Cystic, pyo, hydro or hemato in character.

As a classification salpingitis may be infectious or purulent, non-infectious or catarrhal. One or both tubes may be diseased.

Catarrhal form is limited to mucous membrane, the tube swollen from thickness varying from a pencil to that of thumb. The folds of mucous membrane are edematous and infiltrated. Epithelial cells are swollen. Muscular coat participates but very little in inflammatory process. Secretion is mucus and epithelial cells. Mild cases recover or pass into chronic form of catarrh.

Purulent salpingitis is the more destructive. The tubes distorted, adherent to neighboring organs, or divided and shrunken or enlarged, divided into parts and crumpled. Epithelia degenerated into pus. Mucous membrane first attacked and having become infiltrated the muscular coat is invaded. The abdominal ostium usually becomes agglutinated, distorted, adherent and closed. In the beginning the uterine ostium may remain potent. A

profuent salpingitis, with discharge of contents into uterus, follows. When resolution does not occur general peritonitis by infection or pus walled off from peritoneum by rapidly formed adhesions, or tubal abscess with distention of tube or neighboring parts, infiltrated and adherent, are the results, with the addition of fatality or life-long invalidism to the patient.

Interstitial salpingitis affects the muscular coat, the result of catarrhal or purulent; the wall is involved, tube enlarged and tortuous from the formation of connective tissue, or atrophied with degenerated muscle tissue and, connective tissue taking its place. The different forms of salpingitis are very often accompanied by pelvis peritonitis. The ovary becomes implicated, small adhesions are formed, then cysts, or an abscess with rupture into peritoneal cavity or surrounding organs, or an exudate into Douglas' pouch, becoming a thickened, matted mass, adherent to intestines, omentum, bladder, uterus.

Tubercular salpingitis is the most common form of tubercular disease, of genital, primary or secondary, origin, produced by infection of peritoneum or by coitus from men with genito-urinary phthisis. Military or chronic diffuse. Diagnosis difficult or impossible.

Salpingitis is a common disease. As a rule secondary, limited to period of uterine activity, chief causes being exanthematous diseases, displacements of uterus, uterine myoma, uterine carcinoma, ovarian diseases, tuberculosis, cold, frequent coition, puerperal laceration, incomplete abortions, gonorrhea by extension from vagina to fallopian tubes and peritoneum, intra-uterine injections.

Salpingitis has no special symptom. A pus tube may show no distinctive sign, except recurrent fever. A symptom that excites suspicion is a mucous or purulent flow from genitals, though this may be due to endometritis.

Disease usually bilateral. Pain may not be or may be most excruciating in iliac fossae. Leucorrhœa, menorrhagia, metorrhagia, amenor-

rhea may be present. On examination tubes tender, thickened, distorted, ovary often enlarged or a globular mass of matted tissue. Uterus, ovary, intestines, omentum adherent or pushed out of position. When salpingitis leads to formation of cyst, whether pyo, hydro or hemato, tumor is felt bimanually, and it is difficult to distinguish from tubal pregnancy. Differential diagnosis between ovarian cyst or cysts of broad ligament is very obscure.

Hydro salpingitis causes less constitutional disturbance and is less tender than cystic salpingitis and is often found with uterine fibroids. Hemato is exceedingly rare, due to tubal pregnancy or traumatism. The various forms of salpingitis are but different manifestations of the same conditions at different stages of process. A septic salpingitis in ten days may produce fatal peritonitis or beginning of invalidism, may rupture into peritoneal cavity or discharge contents into bladder or rectum. Such fistulous openings rarely close permanently. And I may say here that it is the opinion among the profession that pus tubes discharge through the uterus and can be drained by dilating and curetting. To be succinct, a large number of surgeons are on record that the lumen of tube at isthmus with its large amount of muscular tissue produces complete occlusion as result of inflammatory process. Again, from the observation of a large number of removed specimens not a drop of pus could be squeezed through uterine end of tube.

Diagnosis of salpingitis is certainly difficult. Physical examination is not always entirely satisfactory, especially so in fat women. The character and situation of pain with dysmenorrhea is a feature. So, for that matter, is menorrhagia. From ovaritis the inflamed tube is distinguished by the shape.

Cellulitis forms a swelling situated lower down. Where the intestines and tube become as an enigma in Douglas' pouch the question of tenderness differentiates the two. Peritonitis is apt to form a larger exudation in iliac fossa.

A purulent salpingitis, if specific, has history as evidence. Again, the severity of the symptoms may and do lessen, indicating that inflammation has subsided, but it again lights up; fever recurrent. Periodical watery fluxes, with colicky pains, are indicative. Repeated attacks of local peritonitis are very suspicious. Rise of temperature, with chilly sensations and tenderness of tube on bimanual pressure, are in like manner suspicious. The symptoms of ovaritis cannot, however, often be distinguished from those of salpingitis. When in doubt, and case especially serious, best to anesthetize patient. Prognosis of salpingitis is a serious problem to confront. Catarrhal form amenable to treatment. Purulent, prognosis bad. It may end fatally from severity, or cause death from exhaustion or invalidism.

TREATMENT.

Acute salpingitis in early stages, expectant treatment—Absolute rest, relief of pain by hot fomentations, anodynes and counter-irritants. To the cervix and vagina a pledget saturated with solution of one part boroglyceride, one of alum and fourteen pure glycerine for three to five days or a week. Opium by mouth or rectum for pain. Close attention should be paid to health and digestion. Diet should be fluid. Bowels regulated by saline aperients or hot rectal injections. Tr. iodine painted internally or externally in beginning is of some avail. Pledgets soaked in ichthyol and glycerine, galvanism, intra-uterine applications of chloride zinc, poultices, hot water bags, rest and tonics. In mild cases iodoform gauze packed in uterus or curetting. The treatment by pelvic massage for the relief of adhesions or massage of the tube is now upon trial, but it seems obvious the contents of the tube must be pushed along and the peritoneal cavity endangered, as well as the tube itself, by such procedure. Interuterine injections must be avoided. Catheterization is impossible, and aspiration not devoid of dangers, especially in septic cases. Incision from vagina and drainage tube of glass, rubber or silver introduced, and iodoform gauze is at

times very beneficial, but this treatment is not advised except in those cases where abdominal section is not allowed. When palliative treatment is of no avail, or when a hydro or pyo salpingitis is developed it is doubtful if any treatment except laparotomy or abdominal section is effective, which means removal of uterine appendages or their preservation. In abdominal operations the operations consist in freeing adhesions, replacing uterus and removing ovary or tube, or any part that has become diseased, Tait's operation, or vaginal incision, behind the cervix, the so-called Battey's operation. Hence if salpingitis is purulent surgical procedures are necessary.

Result—statistics state that in 86 per cent. menopause happens.

Mortality 2 1-2 per cent. in Tait's hands in 147 operations. Good success. Twenty to 30 per cent. die from this disease. A good, reliable table of statistics has been impossible to obtain, but the opinion, crystallized into judgment, is that the removal of uterine appendages when complicated by disease, demands radical operation. When you listen

to the experience of surgeons and witness the martyrs suffering from this disease and the consequences brought by neglect of proper treatment the physician hesitates in being other than conservative, because salpingitis, in its varied moods and tenses is the "bete noir" to the gynecologist. Hence a correct, unbiased study of the patient and disease is of absolute importance. A conservative opinion produces more beneficial results than a hasty diagnosis, especially where differential diagnosis adds but to the difficulty and where the usual classification of salpingitis, although clinically useful, is oft of no avail.

Recently surgeons have recognized that pus from many tubes is very slightly septic and after thoroughly sluicing the peritoneal cavity with normal salt solution, leaving a part in the abdominal cavity, the abdomen is closed. The patient is placed in a bed with the foot raised one and one-half feet for 24 to 48 hours. The result of this treatment has been very satisfactory and promises to reduce the mortality greatly.

—675 Boylston st.

TRAUMATIC NEURASTHENIA—NEUROPSYCHIC MANIFESTATIONS SUBSEQUENT TO FRACTURES OR DISLOCATIONS*.

BY THOMAS H. MANLEY, M. D., NEW YORK.

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When requested by Dr. Chaffee, the chairman of the Committee of Arrangements, to open the subject under consideration for the special discussion of this session, I was somewhat embarrassed for the reason that it has long been my conviction that "traumatic neurasthenia" was nothing more than a fictitious creation intended by the late Sir Eric Erichsen as a substitute for that mythical condition, designated by the same author as "spinal concussion," something long since repu-

diated by quite the united opinion of surgeons the world over.

I say this advisedly, for a large number of injuries of every organ and structure have been examined and treated by me, and no such pathologic condition has followed in a single instance as would stamp "traumatic neurasthenia" as an independent entity.

Moreover, if it has had such a recognition by any of our recent well-known authors in surgical pathology, will not some of the members present indicate in what English, French or German contribution a chapter on it may be found?

But, I do not wish to be misunder-

* Read before the seventh annual meeting of the New York State Association of Railway Surgeons, held at the Academy of Medicine, in New York city, November 16, 1897.

stood in this matter, for far be it from me to deny that we have every type of constitutional disturbance, with exhaustion, depression and despondency after injuries. The asthenic symptoms are, however, by no means all neural, but muscular, vascular, and those which proceed from enfeebled action of any or all of the many organs contributory to the nutrition and energy of all vital processes.

But this aspect of the theme is a large one, and now I will briefly turn to a few neuro-psychic manifestations of fractures, dislocations, fracture-dislocations and dislocation-fractures.

GENERAL OBSERVATIONS.

In connection with the subject of certain pathologic conditions of the body resulting from the effects of the application of great physical violence, it sometimes is desirable or necessary to forecast or determine, if possible, the ulterior effects on the sensorium or the functions of the cerebro-spinal axis in these cases followed by various degrees of repair.

A brief consideration of this theme, as far as it applies to mechanical disorganizations of the framework of the body, known as fractures and dislocations of bone, is here submitted.

INFLUENCES AND CONDITIONS BEARING ON EFFECTS, RE- SULTS REPAIR AND SEQUELAE.

Ordinarily, it is the custom to speak of "full restoration of function" after fracture. This, however, should be interpreted in its relative sense only; for perfect repair of a fully developed osseous body or shaft never occurs after a complete fracture through it. The nearest approach to it we find in the infant, the child and youth; but as their bones are not perfectly developed, they outgrow the effects; with them a dual force is in operation after a bone injury, viz: recuperative processes conjoined with continued growth, the latter tending to efface all evidence of trauma.

With this class then it may be said, under normal conditions and appropriate treatment, practically

perfect restoration and repair are secured both anatomically and physiologically.

In the adult this cannot be said. At this stage of life the matured bone possesses great resistance, requiring proportionate force to disorganize or displace it, the extent of shock to the system and simultaneous laceration of contiguous structure being considerable under many circumstances.

After the meridian of life is past and the stage of senility is approached, we may encounter complicating phases in fractures and dislocations, the sequelae of which require special notice.

At this period pronounced vascular changes commence; the compact tissue of the bone shafts in its central lamelle becomes vascular, hard and brittle. The bone marrow has shared in this change, and what was formerly red is now yellow. Shrinkage and condensation of the whole bone has begun.

REGIONAL DIVISION AND OR- GANIC COMPLICATIONS.

The immediate and remote effects of various fractures may, in a measure, be predicated by the region of the body or bones in which they occur; as for example, those of the skull, the spine, the ribs, sternum, pelvic bones, or those of the extremities, much depending on whether the traumatism is in near contact with an articulation or important organs. Cranial fractures per se are of no serious consequence, their gravity proceeding from damage to the brain; those of the ribs being sometimes serious from injury to the pleura or lung; spinal, sternal and pelvic fractures are often grave injuries because of their close relations with vital organs. Fractures of the upper extremity are less trying than those of the lower, as here comfortable fixation is possible with the body in motion.

The degree of pain and discomfort succeeding fractures of shafts of bones will depend not only on the quality of the fracture, whether simple, multiple, or compound, but on the extent of laceration of the nerve trunks, and whether the fracture extends through the diaphysis, or has

shattered the head of the bone and opened into an articulation.

LOCAL AND CONSTITUTIONAL
CONDITIONS SUPERVENING AF-
TER FRACTURE, IN WHICH
VARYING DEGREES OF
PAIN ARE A NOTABLE
FEATURE.

As a general rule, the pain succeeding a simple, or even many compound fractures, after a proper adjustment, is insignificant, and the extent of constitutional disturbances slight. But there are very many exceptions.

Some there are who never quite fully survive the shock of fractures. This is notably the case when great concussion force has been simultaneously sustained by the whole body; or when the circumstances attending the accident are such as to violently impress the emotions.

The pleurisy and the emphysema, at times following severe costal fractures, the complication of synovitis when a joint is involved, the over-tension or laceration of nerves, and the necessary protracted fixation of the limb are all productive of pain and wear on the system.

Femoral fracture in heavy or old people is often a very serious affair, many sinking under the ceaseless suffering entailed by enforced recumbency of the body and the consequences.

Everything equal, the degree of constitutional disturbance and local distress will be dependent on the situation of osseous disorganization, the size of the bone, the compact arrangement and relative strength of the adjacent or connecting ligaments, tendons and muscles; besides, it goes without saying, the degree and character of complications in the other soft parts.

It is very greatly to be regretted that, so far, authors have not been able to devise a more rational and definite classification of fractures than now exists. This is most manifest in the types of fractures designated "simple and compound." Indeed such a thing can scarcely be conceived of as a simple fracture; and as a matter of fact, many of them, in our favored era of antiseptic surgery, are vastly more complicated and serious than the com-

pound, for if protected from the dangers of infection, the latter is quite as capable of painless union as the former.

THE CONDITION OF THE PA-
TIENT AS A FACTOR IN NEU-
ROPSYCHIC PHENOMENA,
AFTER TRAUMA.

Everyone who has given attention to this phase of the subject must concede that the degree and character of the sufferings endured after serious injuries of the extremities, in a considerable number, are largely influenced by systemic conditions, the most conspicuous of which are hysteria, rheumatism, syphilis, tuberculosis and neuralgia. In certain climates and localities not only are reparative processes retarded or even arrested, but pain is greatly intensified by malaria.

A knowledge of these facts will remind us that the patient must be treated as well as the injured limb, and such specific remedies administered as a given case may require.

ON THE MECHANIC ADJUSTMENT
OF A LIMB OR REGION, AS AN
ELEMENT IN AGGRAVAT-
ING OR RELIEVING
PAIN.

About twelve years ago an alleged case of malpractice was tried in the Superior Court of New York, in which an action was brought against a practitioner by a young man who had sustained a fracture at the lower third of the tibia. His ground for action was not that he did not recover good use of the injured limb, or that there was any deformity, but "that in consequence of his broken leg being kept over a long period in a fracture-box, he was confined to the house too long and suffered unnecessary pain." The case was ably defended, but one of our best-known writers on fractures in America supported the position of the plaintiff, and the jury brought in a verdict for him. On appeal, a higher tribunal reversed the judgment, but it cost the doctor nearly two thousand dollars to defend himself; of course, he never was paid his fee, and through the wide notoriety given the case by the press, his reputation suffered and he had no redress.

The above case and many more similar to it, which abound in the

annals of forensic medicine, suggest the cogent question: Is a patient's suffering augmented or his comfort enhanced by any special mechanical appliance, provided this be adjusted in accordance with the orthodox tenets of surgery? To this, although it may seem paradoxical, one must certainly answer in the affirmative.

This is because of the peculiarities of different individuals, as, for example, in one it may be the most conducive to comfort to wear slack dressings; another prefers the firm bandage; some will endure a flexed limb with muscular relaxation rather than steady extension. With some, plaster of paris or starch seems to provide a more comfortable adjustment than movable splints. With some, continued fixation and protracted rest of the fragments is succeeded by excellent results; in others again, immobilization may be followed by serious impairment of function, muscular atrophy, single or multiple, ankylosis of contiguous joints. The latest fad is to get the patient on his feet at once, regardless of motion of the fragments.

A fracture is, indeed, an unknown quantity, and many, apparently of a simple description, have resulted most disastrously. There is no department of surgery of a more responsible character than the treatment of fractured bones; and hence the importance to our patient and ourselves, not only of advice and consultation with the experienced, but vigilant and studious attention in every case.

HOW CAN THE INTENSITY OR THE DURATION OF PAIN BE ESTIMATED IN A FRACTURE, A DISLOCATION OR FRACTURE DISLOCATION.

Pain is an imponderable manifestation, a perversion of normal sensation, the essential nature of which is as yet unknown. Perhaps, however, in these days of startling inventions, it may not be out of the range of human ingenuity to invent a dolor-metre. The wondrous revelations of the skiagraph would seem to foreshadow such a possibility.

Intensity of Suffering.—Pain or soreness in varying degrees is an essential factor of practically every

fracture; and in any type, when of an intense or agonizing character, is quite invariably a monitor which must be heeded, for it heralds forth to us, in no unmistakable manner, that something is going wrong. It is an almost invariable danger signal of intense vascular stasis of local gangrene or somatic death of a limb. To stifle it with narcotics is to destroy all hope. When its intensity is great, every description of dressings should be removed and the limb readjusted. But we should not confound this with the moderate, tolerable pain of most severe injuries. The correct interpretation derives its greatest value in the fractures of children.

Total Absence of Pain.—It has been long conceded that the entire absence of pain in fracture implies normal repair, that everything is doing well, which as an *au courant* statement we may concede, although there are many exceptions. For instance, under gypsum-dressing, I have more than once seen a simple fracture become compound, with extensive ulceration, when there had been no evidence of suffering given by the patient before the discovery.

Its Significance in Medico-Legal Cases.—In civil litigation, the presence and character of one's suffering are always taken into consideration, and on professional opinion the Court must be guided in many cases.

It therefore behooves us to acquaint ourselves with those resources of science which will not deceive us when there is good ground for suspecting malingering. It is rare that the plaintiff will allege the presence of pain, as a source of suffering or a cause disqualifying return to his usual pursuits, until after he has been through active treatment, when he may, with ample reason, be fully justified in his complaints.

PAIN, SORENESS, DIMINUTION OR IMPEDIMENT IN FUNCTION, AFTER A FRACTURE OR DISLOCATION HAS BEEN TREATED.

Pain and weakness in a limb may remain long after it is reduced, or a fracture has been treated. Fragments which can be effectually adjusted or replaced or luxated bone

restored, seldom are a source of distress, weakness or suffering.

Defect in Function.—Certain fracture-dislocations are almost invariably followed by defect in function; as those of the patella, femoral, intra-capsular, Pott's fracture, greenstick, elbow-fracture in the adult, and a typical Colles'.

On April 3 a man of fifty years came under my care with subcoracoid-humero-scapular dislocation. The head of the bone had been out about fourteen hours. It involved the right shoulder, and by simple moderate manipulation was readily reduced. But three months later he could do practically nothing with the injured limb. Rigidity, muscular atrophy and pain on motion were most pronounced.

A condition analogous to this so commonly follows Colles' fracture that the cautious will always protect himself by warning the patient of the possible results.

In all this class of cases we will invariably discover pronounced evidence of nutritive changes, of vascular disturbances and atrophy. Organic changes involving or contiguous with the joint cannot escape detection when an examination is conducted with proper scrutiny; or when the muscle-sense and tendon reflexes are properly tested.

Ankylosis or Restricted Joint Action.—The enforced fixation of certain joints during fracture treatment or the simultaneous injury of muscle and tendon favors a stiffened state of the joint below or above the fracture. The muscles have contracted; adhesions, multiple tendo-aginitis, with diffusive vascular and inflammatory changes, have all participated in leading to structural alterations.

Unless, however, when there be extensive organic changes, depending on central or constitutional conditions, fracture-ankylosis is generally quite completely recovered from.

A Weak, Wasted or Painful Limb.—Paralysis, paresis or hyperesthesia, with marked or atrophic interstitial changes in a limb after fracture in a sound subject, point either to a vascular or neural lesion; the latter

probably supervening on the former. My own experimental and clinical observations on fracture have quite conclusively demonstrated that the nerves resist the effects of trauma much more effectually than the bloodvessels. And hence we will observe that in severe fractures the resulting intumescence and edema are evidence of vascular embarrassment, with other hemic changes, long lingering after the function of the spinal nerves is restored.

THE DEGREE AND QUALITY OF DEFECT FOLLOWING FRACTURE OR DISLOCATION.

Excluding the compound variety and special fractures, as the regional, of the skull, thorax, pelvis or spine, we have various ulterior results depending chiefly on the age and health of the patient, the site, the degree of violence sustained and the treatment.

Defective Repair.—Happily, in the great preponderance of cases efficient repair is realized with restoration of function; but in a fairly considerable margin this has been defective or faulty, when we meet with 1st, delayed or non-union; 2d, deformity or shortening; 3d, ankylosis or defective joint action; 4th, a weak, wasted or painful limb.

Non-union or Mal-union.—For reasons often not well understood, certain bone shafts sometimes manifest a tendency to tardy or defective solidification, a circumstance which may involve the surgeon in serious trouble if he be not on the alert for it. For example, I am familiar with different cases in which the shafts of various bones, after having been treated for fracture, on commencing use of the limb, began to bend and bow at the point of union, a most exaggerated degree of deformity supervening, to the great dismay of the patient and friends; and such a case I was lately permitted to see, through the courtesy of a London surgeon. The patient was a boy who had had a femoral fracture two years previously. He made a good recovery, and everything went well for a year and a half, when an angular deformity appeared at the site of fracture, and he commenced to limp.

There are certain fractures which seem to have united, but in reality

have not, by an osseous bond, though a fair share of functional use may be secured. Examples of this are seen in the patella and in the femur.

In complete fracture of the femoral shaft of the adult moderate shortening generally follows without sensible detriment to the use of the limb.

Deformity, Simple or Complicated.—Deformity from slight deflection or hyperostosis, at the seat of fracture in the diaphysis of a bone shaft, is a matter of trifling consequence; but when a joint is involved, tendons displaced, ligaments torn, and the capsule opened, obvious and permanent impairment in the strength or action of the limb is almost certain to ensue. Who ever saw anything like full functional restoration in a typical Pott's or Colles' fracture?

THE QUESTION AS TO THE UTILITY OR PROPRIETY OF OPERATIVE INTERVENTION IN FRACTURES OR DISLOCATIONS.

It is a well-known principle of law that "no fee demanded, no financial responsibility entailed;" a very fortunate provision for the hospital or dispensary surgeon who attends the destitute. But this does not apply to corporations, sanitarium or pay-patients in hospitals.

The question may arise, and has often arisen, after one has been discharged from the surgeon's care with a defective limb: which is responsible for the largest share of damage here, the injury or the treatment?

Notwithstanding all our resources of prevention to-day, the one who makes a simple fracture of the femur compound, who wires a patella, or who undertakes an arthrotomy for an irreducible humero-scapular dislocation, assumes a grave responsibility.

That many a useful limb has been forever ruined by ill-timed, injudicious or unskillful surgery every one familiar with facts must concede. In litigation cases when opportunity permits, great advantage will be taken of this contingency.

Psycho-neural Phenomena in Relation to Diagnostic Aids and Diagnosis.—When one has sustained a severe injury over the bony framework

of the body, apprehensive and mental unrest are great until he can be assured of the absence or presence of a fracture, or, perchance, a dislocation. Medico-legal questions, too, may be involved; so that not infrequently accurate diagnosis may be as desirable to relieve worry and impart confidence as treatment itself. But we are often confronted by such complex conditions as to render the proof of the presence of a fracture quite impossible, especially when the fixed or deeply lodged bones are involved. This is notably the case when disorganization involves osseous structures contiguous with the articulations, those of the spine or pelvis.

In internal medicine and those lesions dependent on constitutional disturbances, diagnosis is the key to treatment; in many concealed, obscure fractures, however, it has no therapeutic relevancy whatever; although from the psychic and forensic aspect it is otherwise.

It is true that by the free, aseptic incision we may penetrate to any depth and lay bare the seat of injury with greater security than formerly, but such extensive mutilations are not art, and, moreover, may be productive of incalculable harm.

The surgeon in such a dilemma now turns to the latest and one of the most invaluable gifts of modern science, to the utilization of the Roentgen rays, that he may critically inspect the naked framework of the bones, and spare his patient the dangers of sanguineous surgery. But, unfortunately, here disappointment may await him, for the skiagraph is neither a positive nor definite resource, in a considerable number of osseous disorganizations which are not readily detected by ordinary means. For example, quite a few cases have been reported where it has pointed to cleavage and rents in bones that did not exist, and vice versa, indicated osseous perfection, where crepitus and mobility established, beyond question, the presence of fractures. Speaking from an abundant experience with the radiograph, Tracy, of Boston, says: "While much has been gained in accuracy of diagnosis by the aid of the

X-ray's pictures, there is one branch of practical medicine where harm is threatened by their employment. I refer to medical jurisprudence . . . their indiscriminate admission will hurt the cause of justice, because they can easily lead to fallacy and error." He goes on to show where the deformity of a Colles' fracture may be photographed in the normal limb.

Dr. P. M. Jones is more optimistic and says: "Here we have an agent which cannot err; if it gives an answer at all, it must be truthful, and shows to the examiner the actual conditions." (Journal of the American Medical Association, November 6, 1897.) The former is a practical surgeon and the latter a teacher of electro-therapeutics. Possibly, sometimes error comes through want of skill in photographing; but when the sketching is done by experts, ignorance cannot be charged. And these are the very instances where the greatest fallacies have been demonstrated. Dowd has lately verbally reported a case of fracture of the leg, three days old. The patient, inspired by curious motives, had the limb skiagraphed; but the pictures were identical in both tibia, and he refused to pay the bill for professional attendance on the ground that he had no fracture.

The past summer, at the University Hospital, London, it was my privilege to witness an operation by Mr. Barker on a girl's hip. It was a case of old dislocation. A large, well-developed X-ray photograph showed the head of the femur resting on the dorsum ilii, a deep, hollow cavity marking the site of the acetabulum. But, on section, no trace of the femoral head was in evidence, and the acetabulum was entirely obliterated by absorption, a smooth, hard surface only remaining. I saw a somewhat similar case at the Laraboisiere in Paris, where the ray exhibited a subcoracoid dislocation of the humerus. In vain varied and repeated efforts were made to reduce it. Section showed no luxation at all, but a fracture through the anatomical neck. The skiagraph is the most valuable diagnostic aid we possess, and in conjunction with other

resources, of great assistance, but alone, unreliable.

RESTORATION OF FUNCTION AFTER DISLOCATION.

After dislocation of a limb, one of four things may occur:

1. It may be overlooked; something which happens oftener than is commonly supposed.

2. It may be reduced; the ordinary event.

3. It may be irreducible; quite unusual.

4. It may be reducible, but cannot be retained; rare in most articulations, but common in one.

5. Exclusive of scapulo-clavicular dislocations, which as a class cannot be retained after reduction, there are others in which reduction cannot be maintained, because of a chipping off or fracture of the rim of the mortice.

That a person may go about unconscious of a luxation, goes to show that dislodgment of a bone from its socket is not always incompatible with the retention of a fair degree of function remaining. This is notoriously the case in the humero-scapular and claviculo-scapular luxations. Dislocations of the acromial end of the clavicle, when complete, are rarely reducible and seldom or never can be retained.

Failure of reduction or retention invariably implies permanency of defect in a limb, though rarely to such a degree as to incapacitate one from his ordinary employment, if this does not entail heavy labor.

FRACTURE-DISLOCATIONS AND DISLOCATION FRACTURES.

By the former we designate those traumatisms in which the disorganization of bones is the dominant factor, as in Potts' or Colles' fracture, or fractures of the humerus, with simultaneous dislodgment of the scapular head, a condition readily detected when impaction is absent.

Dislocation-fracture is one which is produced by the head of the bone impinging on the border or margin of the mortice or joint-hollow. The best description of this important lesion is given by Senn, who collected twenty-eight cases, and more recently by Dr. Edmund Andrews, of Chicago, who designates this "rim-fracture."

(Fractures of the Rim of the Acetabulum and the Margins of Other Joints Complicating Dislocations. International Clinics, Vol. VIII, seventh series, October, 1897). In these cases retention after reduction of the bone fails, because of loss of osseous support. Accuracy of diagnosis in

this class is of the highest importance because of its bearing on prognosis; and here the Roentgen rays render possible the precise recognition of the lesion, without division of the soft parts, a boon of priceless value.

No. 115 West Forty-ninth Street.

THE DIATASE OF MALT.

BY J. R. CLAUSEN, A. M., M. D.

The similarity between the diastase of malt and the ptyalin of the saliva has been recognized by leading scientists for years past, and its value in the treatment of different forms of starchy indigestion has been ably set forth in the medical press both of this country and Europe.

The use of diastase in medicine, however, has not met with the ready recognition from the medical profession that its value as a remedial agent demands. Where malt products containing diastase have been prescribed it has been more on account of their food value than for the diastase contained therein, its beneficial effects in amylaceous indigestion being entirely overlooked.

Recently, however, the preparations put out by the Malt Diastase Company, of New York City, have attracted much attention and called forth much favorable comment from the profession in general.

That they are greatly superior to all malt preparations heretofore produced is beyond question, while their value in the treatment of all

complaints arising from the imperfect assimilation of starchy and vegetable foods has been amply demonstrated.

Maltzyme, the name of the product of the Malt Diastase Company, is prepared by an absolutely new and improved process, by which the diastasic properties of the malt are retained intact, together with all the phosphates of the grain.

It is offered to the profession in four forms — Maltzyme (plain), Maltzyme with Cod Liver Oil, Maltzyme with Cascara Sagrada, and Maltzyme with Hypophosphites.

In all these combinations the diastasic properties of Maltzyme are retained, while no inert matter whatever is used.

The exceptional limpidity and palatability secured by the process employed by the Malt Diastase Company make them easy of administration and add materially to their value in general practice.

In my private practice I have secured markedly satisfactory results from the use of Maltzyme, especially in combination with Cascara Sagrada and with Hypophosphites, and I can personally give it my most unqualified indorsement.



Editorial

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REGULATIONS FOR APPLICATION TO THE MEDICAL CORPS SERVICE OF THE UNITED STATES ARMY.

The Medical Corps of the Army consists of a surgeon general with the rank of brigadier general, six assistant surgeons general with the rank of colonel, ten deputy surgeons general with the rank of lieutenant colonel, fifty surgeons with the rank of major and one hundred and ten assistant surgeons with the rank of first lieutenant, mounted, for the first five years, and the rank of captain, mounted, thereafter, until promoted to major. Promotion through the intermediate grades of rank from that of captain to that of colonel is by seniority, but there is an examination for the rank of captain and another for that of major, to ascertain the fitness of the officer for promotion. Advancement to lieutenant colonel and colonel takes place without further examination. The surgeon general is selected by the President from among the members of the corps. All vacancies are filled by appointment to the junior grade.

To each rank is attached a fixed annual salary, which is received in

monthly payments, and this is increased by ten per cent. for each period of five years' service until a maximum of forty per cent. is reached. An assistant surgeon, with the rank of first lieutenant, mounted, receives \$1600 per annum, or \$133.33 monthly. At the end of five years he is promoted to captain and receives \$2000 a year, which, with the increase of ten per cent. for five years' service, is \$2200, or \$193.33 per month. After ten years' service he receives \$2400, after fifteen years \$2600, and if he remains a captain after twenty years, \$2800 per year. The pay attached to the rank of major is \$2500 a year, which, with ten per cent. added for each five years' service, becomes \$3250 after fifteen years, and \$3500 after twenty years. The monthly pay of lieutenant-colonel, colonel and brigadier general is \$333.33, \$375 and \$458.33 respectively. Officers in addition to their pay proper are furnished with a liberal allowance of quarters according to rank, either in kind, or, where no

suitable Government building is available, by commutation. When traveling on duty an officer receives four cents per mile and reimbursement of money actually expended for railroad or other fares. On change of station he is entitled to transportation for professional books and papers, and a reasonable amount of baggage at Government expense. Mounted officers, including all officers of the Medical Corps, are provided with forage, stabling and transportation for horses owned and actually kept by them, not exceeding two for all ranks below a brigadier. Groceries and other articles may be purchased from the Commissary, and fuel from the Quartermaster's Department at about wholesale cost price. Books and instruments are supplied in abundance for the use of medical officers in the performance of their duties.

ARMY MEDICAL SCHOOL.

In 1893 the Secretary of War authorized the establishment of an Army Medical School in the city of Washington for the purpose of instructing medical officers who have been appointed since the last preceding term of the school, and such others as may be authorized to attend.

The course of instruction is for five months, and will be given annually at the Army Medical Museum, in Washington city, commencing in November.

Five professors have been selected from among the senior medical officers of the army, stationed in or near the city of Washington, also an instructor in first aid and ambulance drill.

The faculty of the Army Medical School consists of—

1. A President of the Faculty, who is responsible for the discipline of the school, and who delivers a course of lectures upon the duties of medical officers in war and peace (including property responsibility, examination of recruits, certificates of disability, reports, rights and privileges, customs of service, etc.).

2. A Professor of Military Surgery (including the care and trans-

portation of wounded, and operative surgery).

3. A Professor of Military Hygiene (including practical instruction in the examination of air, water, food and clothing from a sanitary point of view).

4. A Professor of Military Medicine.

5. A Professor of Clinical and Sanitary Microscopy (including bacteriology and urinalogy).

DUTIES AND PRIVILEGES.

A medical officer after completing the course of instruction at the Army Medical School is first assigned to duty as junior at a large military post. His stations after that are likely to alternate between the frontier and more desirable points, a tour of duty being usually four years at once place.

Leave of absence on full pay is allowed at the rate of one month per year, and this when not taken may accumulate to a maximum of four months, which at the end of four years is then available as one continuous leave. Beyond this an officer may still be absent with permission on half pay. Absence from duty on account of sickness involves no loss of pay.

Medical officers are entitled to the privilege of retirement at any time for disability incurred in the line of duty, or after forty years' service. On attaining the age of sixty-four they are placed upon the retired list by virtue of law. Retired officers receive three-fourths the amount of their pay proper at the time of retirement.

When medical officers with the rank of captain approach the period of their examination for promotion to a majority they are usually assigned to duty as attending surgeons in the principal medical centers of the United States, to enable them to become familiar with the practice of the leading physicians and surgeons in this country, and to attend medical lectures, meetings of medical societies, etc. These assignments are made for one year only, in order that as many medical officers as possible may be enabled to avail themselves of the advantages thereby af-

forded. At the end of this tour of duty they are required to make a detailed report to the surgeon general showing how much of their time has been occupied by their official duties and to what extent they have availed themselves of the advantages offered for professional advancement.

EXAMINATION AND APPOINTMENT.

Appointments to the Medical Corps of the Army are made by the President after the applicant has passed a successful examination before the Army Medical Examining Board and has been recommended by the Surgeon General. Due notice of the meeting of the Board is published in the medical journals. Permission to appear before the Board is obtained by letter to the Secretary of War, which must be in the handwriting of the applicant, giving the date and place of his birth and the place and State of which he is a permanent resident, and inclosing certificates, based on personal acquaintance, from at least two reputable persons as to his citizenship, character and habits. The candidate must be a citizen of the United States, between twenty-two and twenty-nine years old, of sound health and good character, and a graduate of some regular medical college, in evidence of which his diploma will be submitted to the Board. The scope of the examination includes the morals, habits, physical and mental qualifications of the candidate, and his general aptitude for service; and the Board will report unfavorably should it have a reasonable doubt of his efficiency in any of these particulars.

The physical examination comes first in order, and must be thorough. Candidates who fall below sixty-four inches in height will be rejected. Each candidate is also required, to certify "that he labors under no mental or physical infirmity or disability which can interfere with the efficient discharge of any duty which may be required." Errors of refraction, when not excessive, and not accompanied by ocular disease, and when correctible by appropriate glasses, are not causes for rejection.

The mental examinations are con-

ducted by both written and oral questions, upon—

I. Elementary branches of a common school education, including arithmetic, the history and geography of the United States, physics, ancient and modern history, and general literature. Candidates claiming especial knowledge of the higher mathematics, ancient or modern languages, drawing, analytical chemistry or branches of natural science, will be examined in those subjects as accomplishments, and will receive due credit therefor, according to their proficiency.

II. Professional branches, including anatomy, physiology, chemistry, hygiene, pathology and bacteriology, therapeutics and material medica, surgery, practice of medicine, obstetrics, and the diseases of women and children.

Examinations are also conducted at the bedside in clinical medicine and surgery, and operations and demonstrations are required to be made by the candidate upon the cadaver.

Hospital training and practical experience in the practice of medicine, surgery and obstetrics are essential to candidates seeking admission to the Medical Corps of the army, who will be expected to present evidence that they have had at least one year's hospital experience, or the equivalent of this in practice.

To save unnecessary expense to candidates residing at a considerable distance from Washington, those who desire it may have a preliminary physical examination and a mental examination in the "elementary branches of a common school education," by a medical officer of the army stationed most conveniently for this purpose, who will act under instructions from the Medical Examining Board.

The merits of the candidates in each of the several branches, and also their relative merit as evinced by the results obtained from the entire examination, will be reported by the Board, and in accordance with this report approved candidates are appointed to existing vacancies or to such as may occur within two years one examination may be allowed a

thereafter. An applicant failing in second after one year, but not a third. No concession can be made for the expenses of persons undergoing examination, but those who

receive appointments will be entitled to travel allowances in obeying the first order assigning them to duty.

There are three vacancies in the corps to be filled.

Book Reviews.

TWENTIETH CENTURY PRACTICE. An International Encyclopedia of Modern Medical Science. By leading authorities of Europe and America. Edited by Thomas L. Stedman, M. D., New York City. In 20 volumes. Volume XIII, "Infectious Diseases." New York. William Wood & Co. 1898.

The thirteenth volume of this work is in no way inferior to its predecessors, and its contents come from the pens of some of the best medical writers of the period. It treats of infectious diseases, opening with a chapter on ptomaines, toxins and leucomains by Dr. Victor C. Vaughan, of Ann Arbor, Mich. This chapter is very broad and interesting, entering into a discussion of the various poisons as indicated.

Infection and immunity forms the subject of the next chapter, by Dr. Harold C. Ernst, of Boston. The various channels of infection are cited and the predisposition to infection discussed.

Waterborne diseases is the subject of a chapter by the late editor of the *British Medical Journal*, Mr. Ernest Hart, and Solomon C. Smith. This is a subject in which the late Mr. Hart was much interested, and contributes in no small way to our knowledge of diseases from contamination of water.

The duration of the periods of incubation and infectiousness in acute specific diseases is the subject of the next chapter, by Mr. Dawson Williams, London, which the title explains.

"Smallpox," by Dr. John W. Moore, of Dublin, is the subject of an

excellent chapter on this disease. It is followed by one on "Vaccination" by P. Brouardel, Paris, which is also exhaustive.

"Mumps," by Jules Comby, of Paris, finishes this volume.

Every additional volume of this magnificent series, called the "Twentieth Century Practice," impresses us with additional force that it will stand completed the most essential work of the period for the medical practitioner.

SEXUAL NEURASTHENIA—Its hygienic causes, symptoms and treatment. By George M. Beard, A. M., M. D., New York. Edited with notes and additions by A. D. Rockwell, A. M., M. D. New York. Price \$2.00. E. B. Treat & Co., publishers, 241 West Twenty-third street, New York. Fifth edition.

When a book has reached its fifth edition in the remarkably short space of time that this one has there is little left for the reviewer to say. In fact the public have already reviewed it in a manner most satisfactory to the authors. This edition, however, has been so enlarged and the electro-therapeutic management of this class of diseases introduced in such a manner as to make it a valuable addition to the previous editions.

Messrs. E. B. Treat & Co., of New York, will shortly issue their *Medical Annual*, which, as on previous occasions, bids fair, according to the prospectus, to eclipse any other.

CLINICAL SURGERY AND SURGICAL PATHOLOGY

In charge of T. H. MANLEY, M. D., New York

A CASE OF SPONTANEOUS ANEURISM OF THE RADIAL ARTERY IN THE TABATIERE: TREATMENT BY EXCISION OF THE SAC—RECOVERY.

BY ROBERT BRAMWELL SMITH,
M. R. C. S., ENG.

On January 25, 1896, I was called to see a woman who was suffering from hemiplegia of the right side. Speech and deglutition were affected, I was told that two weeks previously she had had a stroke whilst engaged in household duties. On examining the right arm I noticed a fluctuating swelling about the size of a large marble in the space known as the "tabatiere anatomique." Near the back and outer side of the wrist joint this swelling had all the classical signs of an aneurism. After about three months' treatment by rest and the administration of iodide of potassium the patient improved so much that she was able to use her limbs fairly well and her speech gradually returned. I then elicited the following history: She was 57 years of age, married, of mixed Spanish and English blood, and a dressmaker by occupation. At the age of 14 years she had had her right leg amputated at the knee for incurable disease of the foot. She had had 14 confinements at full term, the forceps being used in every case. Twice craniotomy had been performed and 12 children were born alive. Nine of the children were then alive and all were apparently healthy and of adult age. Two had died in youth from scarlet fever and one from bronchitis. She had had no miscarriages and there was no history of syphilis. At the age of 27 years (30 years previously) she had had a "stroke." Paralysis of one side followed and she lost her sight for ten days. This occurred a fortnight after one of her confinements. On examination a well-marked systolic bruit was to be

heard at the junction of the sternum and the manubrium, which was conveyed along the carotids with great distinctness. On passing the fingertips over the vessels of the neck the peculiar rosary-like feel of atheroma was experienced. Not the slightest sign of degeneration could be detected by the fingers in either the brachial, radial or ulnar arteries of either side. Arcus senilis was well developed. The patient first noticed the swelling at the wrist about five years previously, her attention being drawn to it by the uneasy sensation produced when she used her scissors. There was no history of injury whatever. I had the patient under observation for the rest of the year 1896. On March 18 I began to treat the aneurism as the patient felt a great deal of pain proceeding up the arm from the swelling. Pressure over the radial artery above the sac, together with pressure below and upon the sac by means of an elastic bandage was applied on three different occasions for some hours each time and discontinued when pain was too severe for the patient to bear. Pressure was kept up on the radial artery in the intervals. At the end of three weeks the pulsations had ceased altogether in the sac. Unfortunately, the cure was not permanent; probably from voluntary movement of the thumb the clot was disturbed and pulsation began to show itself. Rather strangely, at the time that the pulsation was noticed the patient had a third, though slighter, attack of hemiplegia. In addition to the paralysis there were several shorter attacks of spasm of the muscles of the arm on the affected side. The arm was brought round and the muscles were held in a condition of tonic contraction. There was well-marked anaesthesia all down the right side. The symptoms of paralysis left her by November, when she was persuaded to see Mr. Thomas Jones, at the Manchester

Royal Infirmary, and he advised excision. As the patient now had great pain and as her hand was useless I determined to operate after showing the case at a meeting of the Manchester Medical Society. On December 26 the patient was put under chloroform and the brachial artery being controlled by digital pressure I made an incision of three inches in length directly over the swelling. The superficial structures and fascia were cut through and several large veins were cut and clamped. The sac was exposed, occupying the space between the tendons of the extensor ossis metacarpi pollicis, extensor primi internodii pollicis, and extensor secundi internodii pollicis, passing under the latter tendon. After some dissection, owing to the tumor extending into the substance of the abductor indicis, two branches were seen proceeding from the distal end of the sac, one being probably the continuation of the radial artery to the deep palmar arch. These, and the radial artery itself, which was much enlarged, were tied with recently boiled silk, and the wound was sutured with silkworm gut. No drainage tube was used, and the wound was dressed with Lister's double cyanide gauze.

Two weeks after the operation the wound had healed by first intention, except where one suture had been disturbed. In three weeks the wound was healed and the patient, contrary to my advice, was at work with her machine. Within a month she had done a day's washing. The aneurism was of about the size of a large marble or a chestnut and of the sacculated variety. It was partly filled with a firmish white clot. The points of interest are 1. The rarity of non-traumatic aneurism in the radial artery. 2. The absence of any satisfactory reason for the formation of an aneurism in such situation. My own opinion is that the aneurism was due to embolism, and probably dated much further back than the period of five years during which the patient had noticed it. I believe the increased prominence of the symptoms were due to degenerative changes peculiar to the patient's age and that nature was attempting

a cure in an imperfect way. I cannot help thinking that the clot in the sac being disturbed had something to do with the second and third attacks of hemiplegia. 3. The advantages of excision in accessible cases over other methods. The patient was a most unpromising subject for operative measures or chloroform narcosis, yet she made a perfect recovery without a single bad symptom.—Manchester.

SUCCESSFUL EVACUATION OF HYDATID CYSTS OF THE LIVER.

Cheney (Archives of Pediatrics, Vol. xiv, No. 11, p. 851) has reported the case of an Italian boy, seven years old, who came under observation with vague symptoms: Occasional pain in the right side, headache now and then but not constantly, and during the previous week several vomiting spells. His appetite was reported to be fair. He slept well at night and his bowels moved regularly each day, but his mother had noticed a swelling in the right side, about two years before, which had never disappeared, but had rather grown larger. The child appeared healthy, although his body and limbs were moderately emaciated. No icteric hue could be detected about the skin or conjunctivae. The tongue was heavily coated with a yellowish fur. On inspection a swelling was plainly visible in the region of the liver, and on palpation it was found to extend downward as far as the level of the anterior superior iliac spine, and inward to the median line. The swelling was evidently somewhat tender to the touch. Its outline was smooth, not nodular, and its consistence hard throughout most of the extent, but in one part, about three inches below the border of the rib, the swelling was distinctly fluctuating. Running across the right side of the abdomen, just below the border of the ribs, there was appreciable to touch and sight a sulcus or groove, apparently separating the mass below from the liver above. The lower border of the tumor was sharp and distinct, and the examining fingers

could easily be inserted beneath it, and it descended on deep inspiration. On percussion there was dulness over the area of swelling directly continuous with the liver-dulness above, but not extending to the lower edge of the tumor as determined by palpation. In a zone about two inches in width over the lowest portion of the tumor the percussion note was tympanitic. The dulness extended to the median line internally and to the axillary line externally. Directly back of the axillary line and posteriorly toward the spine the percussion note was tympanitic, the dulness not extending in that region below the normal liver-dulness. Heart, lungs and urinary secretion were normal. Fluoroscopic examination showed distinctly the upper rounded border of the liver rising and falling with each respiration, but it failed to give any idea of the relation of the parts below the level of the ribs and, therefore, left the character of the tumor in doubt. As a final resort puncture with a hypodermic needle was made at the point where fluctuation had been found, and fluid was obtained which was turbid and looked like thin pus. Under the microscope it showed many pus cells, but no echinococcus hooklets. The diagnosis lay between malignant disease, abscess or hydatid disease of the liver and sarcoma of the kidney or pyonephrosis. To remove the doubt an abdominal incision was made, when it was at once seen that the tumor involved the substance of the liver. From the superficial appearances it was thought to be an abscess of the liver and this organ was accordingly stitched to the edges of the incision, the wound packed with gauze and the boy put back in bed to await the formation of adhesions before opening the abscess. On incising the tumor three days after, thin turbid fluid escaped, together with numerous transparent glistening cysts the size of grapes. The cavity was washed out and the wall of the mother cyst removed. The latter when distended must have measured between four and six inches in diameter. After its removal the liver still seemed to be too large, so that

a long hypodermic needle was passed from the cyst cavity upward into the liver beneath the ribs and with this there was withdrawn perfectly clear transparent fluid. An incision was then made in the track of the needle and another cyst, equally as large as the first, was evacuated of its contents of fluid and daughter cysts. Drainage tubes were inserted, the wound dressed and the boy put back to bed. He recovered slowly but without complication.

THE TREATMENT OF HEMORRHOIDS BY INJECTIONS.

The treatment of hemorrhoids by the injection of carbolic acid and glycerine, mixed in various proportions into the substance of each pile by means of a hypodermic syringe was first used by American surgeons. S. G. Shaleeta, of the Kieff Jewish Hospital (in a reprint from the South Russian Medical Gazette), has modified this method by using pure liquid carbolic acid, injecting each pile with a Pravaz's syringe to a certain degree of fullness, and completing the operation in one sitting. Two, three or four syringefuls of the acid are injected, according to the number and size of the tumors. For external piles he uses a mixture of two parts of pure carbolic acid to one part of a two per cent. of cocaine. Even if four syringefuls of this mixture are injected the quantity of cocaine is not sufficient to cause dangerous symptoms. As a matter of experience only a few drops should be injected where we have to deal with external piles, the syringe being introduced through the mucous membrane, and not through the skin. The history of 69 cases treated in this way is given, and the results in all cases were highly encouraging. When the piles shriveled up and separated the surface presented was similar to that produced by the operation for ligature or the clamp and cautery. The advantages which the author claims for this mode of treatment are: (1) Absence of marked pain during the injections; (2) no necessity for anesthesia (this is a great advantage in old and feeble patients, and those

exhausted by repeated hemorrhages); (3) little risk of suppression of urine following this operation; (4) no loss of blood during the operation; (5) no necessity to keep the bowels quiet for three or four days after the operation, as is the case in other methods of operating.

THE SURGICAL TREATMENT OF SUPPURATIVE PERICARDITIS.

Dr. John B. Roberts has published in the American Journal of Medical Sciences, December, 1897, an important paper on this subject. He deprecates tapping as both ineffectual and dangerous. In one case as many as ten aspirations had to be performed in thirty-four days; then death occurred. The heart has often been punctured, sometimes from a mistaken diagnosis, sometimes because it was adherent to the anterior wall of the pericardium; fluid confined behind the heart by adhesions cannot be evacuated. The prognosis after incision is good provided it is done early and there are no serious complications. An exploratory aspiration to determine the presence of pus should first be performed. The pleura is in danger of injury from puncture in the usual situations. From anatomical researches, following Delorme and Mignon, Dr. Roberts recommends that the needle should be thrust upwards and a little inwards in the upper part of the

left xiphoid fossa. If pus is found he recommends resection of the thorax in the following manner: Two vertical excisions are made, one about a centimetre to the left of the middle line of the sternum and the other four or five centimetres external to this. The fourth and fifth costal cartilages are exposed at their sternal junctions and divided. Care must be taken not to puncture the pleura. The soft tissues in the fourth and fifth spaces and along the upper border of the sternum are cut through. The trap door so formed is raised and the mediastinal tissues are separated. The triangularis sterni and internal mammary vessels are then exposed. The former is divided close to the sternum within the line of the latter. With the finger or blunt instrument the fascia and muscular fibres are separated and the vessels and pleura pushed outwards. The white surface of the pericardium comes into view and is incised. If irrigation is employed two tubes should be used, one for exit. The drainage tubes can pass through the fifth space or through a hole in the fourth.

For family or medicinal use there is none better than the Jesse Moore whisky, either Bourbon or Rye. In cases or bulk. Jesse Moore, Hunt Co., Louisville, Ky., or L. Heineman, agent, Jamestown, N. Y.

Current Medical Literature.

A CONTRIBUTION TO THE LITERATURE OF EPIDEMIC INFLUENZA.

By DR. ALADAR BEKESS, Vienna.
(Translated from Wiener Med. Presse.)

During the winter of 1889—1890, when the influenza epidemic raged in Europe, many physicians thought they had encountered a new disease, as influenza had almost been forgotten, for the last visitation of an epidemic dated back some sixty years (1830 to 1833).

Influenza is an acute infectious disease, which remains latent in unknown regions for many years, only to make its appearance epidemically, yes, even at times endemically, throughout a country or a whole continent. The evidences of these epidemics can be traced back to the twelfth century (A. Hirsch). They do not disappear as quickly as they come, and only after numerous smaller or larger outbursts do they pass away entirely. Even now we hear of characteristic clinically-observed cases.

Climate and season seem to bear but little weight on the spread of this disease, although it has been noticed that the epidemics seldom occur in summer. As soon as an epidemic makes its appearance the larger part of the population without regard to sex, age or social standing contract the disease; the healthy and the sick, the strong and the weak, all are likewise attacked.

The treatment is mostly symptomatic. I give in the beginning, as in all infectious diseases, a laxative, preferably calomel, in doses of two to five grains for adults (one-tenth the amount for children). The calomel is divided into three powders, given at intervals of one hour. As long as the fever lasts rest and a fever diet are indicated. Formerly I employed internally and gave three to four times daily: Quinine, 3 grs.;

antifebrin, 4 grs.; antipyrin, 10-15 grs.; sodium salicylate, 10-15 grs.

Since 1890, however, I use almost exclusively salipyrin, not only in influenza, but also in ordinary catarrhal affections, rheumatism and neuralgia. I prescribe as an evening dose 15 grs. (seldom 20 to 30 grs.), mornings generally one-half that amount, although at times I do give 10 to 15 grains. For children one-tenth to one-half the above-mentioned doses according to age. I never noticed any unpleasant after-effects from its use, and I was never compelled to resort to larger doses than those I have mentioned. With this remedy I have obtained, without a doubt, the best results, which now and then were almost phenomenal in character. I noticed, as has also v. Mosengeil, that salipyrin must be continued for some time in order to achieve a good result. I prescribe 10 grains at night for three to five days after the fever has disappeared. Even after the fever has fallen to the normal the patient should be confined to his room for a number of days. The eventual complications are to be treated by the usual accepted methods of therapeutics.

HYDROZONE AND GLYCOZONE IN THE TREATMENT OF GONORRHEA.

Prescott, Ariz., Aug. 16, 1897.

Sir:—My attention has been attracted to an article published in your journal for July 3 by Dr. J. A. Silverman, of Butte, Mont. The writer states that no antiseptic has been discovered that will destroy the gonococcus without doing injury to the mucous membrane. As I presume that he is open to conviction, I submit to you for publication the following report of three cases which I have successfully treated during the last few months with hydrozone

and glycozone, which I consider not only harmless, but the most powerful healing agents that I have ever used in my practice of 35 years.

Case 1.—A man called on me on June 20 with gonorrhea of four weeks' duration, with profuse discharge, micturition painful, and an acute burning sensation along the entire urethral tract. Pus sacs had formed in the canal, the meatus was inflamed, and the gonococcus was active, as determined by microscopical examination. I prescribed injections of one part of hydrozone and ten parts of sterilized lukewarm water, an ounce for each injection, four times daily. After two days I reduced the proportion to one part of hydrozone and 15 parts of lukewarm water, and I directed glycozone mixed with an equal amount of glycerin pure to be injected on his going to bed. The diet was not restricted, but no stimulants were permitted. In two days no gonococcus could be detected. The discharge was lessened, the pain and difficulty in micturition had ceased, and in 12 days the patient was well. Continence was imposed for two weeks. Doses of bromide of potassium and bicarbonate of sodium were administered from time to time in order to make the urine alkaline and quiet the patient.

Case 2.—A married man had contracted blennorrhea from a woman who had the whites. The same treatment was ordered, and with such satisfaction that the woman also was brought for examination and treatment. Result, a cure in each case within three weeks.

Case 3.—A man 50 years old contracted gonorrhea from a woman of the town. As the patient lived in the country, 20 miles out, no treatment was given until ten days after infection. Aggravated symptoms of gonorrhea were present, and there was chordee every night; the patient, to use his own expression, was "plumb wild." The hydrozone injections were ordered, one part to 20, owing to the great sensitiveness of the urethra and the possibility of orchitis if a stronger injection was used, as there was a slight swelling of the testicles. The glycozone, di-

luted with equal parts of pure glycerin, was ordered at night. I also gave glycozone internally in medicinal doses to allay a gastric disturbance due to nervousness. In this case the treatment was continued for 25 days. I sent my patient to his cattle ranch happy.

—Warren E. Day, M. D., N. Y. Med Journal.

CONSTIPATION, ITS DANGERS —A HINT IN REGARD TO TREATMENT.

Without doubt, the most frequent departure from the normal state of health is found in the alimentary tract, and is commonly known as constipation.

It occurs in all classes, and is perhaps the most found in the upper classes of humanity, or those of sedentary habits.

This state of affairs may be due to disease, but more frequently it is due to habit first, and afterward it becomes, so to speak, the normal condition of many.

Generally speaking, constipation exists when the feces are retained beyond the usual or normal time, and evacuated with more or less difficulty. It has erroneously been supposed that constipation always signifies a difficult movement of the bowels, but this is not strictly true, as one may have only one movement every other day and yet the stools may be quite soluble. This condition is, however, not frequent, but it has been seen in the experience of the writer.

When constipation exists we will always find either a deficiency in the peristaltic movement of the bowels, increased absorption, motor paralysis of the muscular coats of the bowels, or all of them. The stools are generally of a hard, indurated nature, the evacuations difficult and not as frequent as normally they should be.

ITS DANGERS.

The one great danger to be feared in this condition is auto-intoxication. Normally the waste products are regularly and speedily removed from the body. When they are retained we have at once an infective process set up. The retained material fur-

nishes food for the nutrition and multiplication of numerous pathogenic micro-organisms, and the eliminative apparatus is confronted with a new poison. When ptomaines are thus set at liberty in the human organism we have at once a retrograde tissue-changing process set up; they interfere with the metabolism of the leucocytes and another line of symptoms is set up. The most prominent among the latter are headaches, coated tongue, cold and numb extremities, cardiac irregularity and a general feeling of malaise.

TREATMENT.

For the alleviation of this trouble it is important that one remembers the great factor that habit plays in this particular. The patient should make an attempt to visit the toilet at regular stated intervals and make an effort to have an evacuation of the bowels. It is surprising how much can be accomplished in the proper direction by this simple means.

This, however, will not overcome peristaltic inactivity, it will not lessen absorption, and it will not restore a liver that may have been inactive for a long time.

These indications must be met by a medical adviser of the patient and the proper medicines administered.

A drug that meets the requirements in the majority of cases of this kind is senna, one of the oldest and best-known laxatives. It has a mild but potent action on a torpid liver, and causes free and easy evacuations of the bowels. The Californit Fig Syrup Co. have recognized the value of this drug and have given it the foremost position in their elegant and efficient preparation, which they have named Syrup of Figs.

The value of this preparation is most marked when used in the cases of pregnant women and children, as it produces no pain of a griping nature. It is easy to take and answers every purpose required of a laxative.

Its palatability is a great factor in its administration to children, and even to adults, as there is frequently an idiosyncrasy against drugs of a nauseating character, while its admirable action places it in the fore-

most ranks as a remedy for the disease under discussion.

—J. D. Albright, M. D., Pottsville, Pa.,
Jan. 18, 1898.

INFANTILE DIPHThERIA AND PREVENTIVE INOCULATION.

Riether (Wein. klin. Woch., 1897, No. 28) replies to the numerous papers which have recently appeared on the immunity of sucklings to diphtheria by quoting a series of 31 cases occurring within two years in a foundling hospital with which he is connected; of these only seven recovered. The disease is hence not frequent, but by no means so exceptionally rare as has been asserted. It is practically almost always primarily nasal, the acid contents of the mouths of sucklings preventing, as Monti has shown, the growth of the Klebs-Loeffler bacillus. A case which was at first regarded as primary oral diphtheria was proved bacteriologically to be streptococcal stomatitis; the child got well. One of the other cases was exceptional in that the primary affection was of the unhealed umbilicus, the fauces being attacked secondarily. The disease almost invariably attacked weak and reduced children. It being found impossible to stamp the diphtheria out by room and house disinfection, it was decided to give all children a prophylactic inoculation of 100 units of Paltauf's antitoxin. Of 1450 children thus treated, although in other respects no further safeguard against diphtheria was used, only two contracted the disease. Each of these was extremely weakly, and in each the onset dated from seven weeks after the inoculation. In 1897 no case of diphtheria had developed in the hospital, the only ones under treatment having been brought in ill. There was evidence also that this prophylaxis was diminishing the spread of diphtheria outside the institution as well. The children varied in age from a few hours to two or three months; 240 died of various causes unconnected with the inoculation, and in no one of them was any affection of the kidneys detected. In two there were minute abscesses, the size of a pea, at the site of injection, and in a few a mild

erythema developed at the same spot. An urticarial eruption which also appeared in rare cases could not certainly be attributed to the antitoxin. The author thus considers himself justified in stating that antidiphtheria serum can be injected without danger beneath the skin of infants in the first days or weeks of life, and that 100 units serve as a protection against the disease for five or six weeks. It may be added that this is the largest series of prophylactic inoculations against diphtheria hitherto recorded.

MULTIPLE NEURITIS FOLLOWING INFLUENZA.

Herman B. Allyn has made an extensive study of multiple neuritis following influenza, in which he points out that influenza, like other toxic diseases, is frequently followed by severe lesions of the peripheral nerves, either sex equally liable. According to the cases collected by this author, the condition occurs most frequently between 25 and 45 years, and is most apt to appear during convalescence, sometimes as late as three weeks after the subsidence of the disease. There may be sensory, motor, vasomotor, or trophic symptoms, or all may occur together, but he finds that the sensory and vasomotor effects are the most frequent, therein contrasting with diphtheria and other causes of multiple neuritis. The prognosis is, as a rule, good, recovery usually taking place with complete restoration of function and power, though in five out of thirty-six cases death occurred, in some cases from general motor paralysis, in others from more severe local effects as lingual and pharyngeal paralysis. Recovery may be delayed for months, but the average seems to be about four weeks. The treatment consists, first, in absolute rest in bed; secondly, in the administration of anodynes when pain is severe. Morphine or codeine are of great service, and the writer has also found salicylate of cinchonidine useful, particularly in cases where the pain is not so intense. Later on, potassium iodide and mercuric chloride in small doses may be

useful, and if the pain be localized in a limb, firm pressure as by a flannel bandage often gives relief, and even blistering over the painful nerve has been tried with good effect. The action of the heart and the character of the respiration require careful attention, especially the latter, as diaphragmatic paralysis is not an infrequent complication. The nutrition of the patient requires careful watching, and the author recommends that medication be purely hypodermic, the stomach being reserved for food, this point being particularly important in the administration of anodynes. The writer concludes his paper by an interesting remark that neuritis following follicular tonsillitis is perhaps in some cases influenzal rather than diphtheritic, as some forms of sore throat are accompanied by as much headache, backache and prostration as are found in any case of undoubted influenza, and such cases of neuritis do not always show the more purely motor symptoms that characterize the diphtheritic form.

—*Jour. Amer. Med. Assn.*, July 24, '97.

INSERTION OF ARTIFICIAL GLOBE INTO TENON'S CAPSULE.

Morton thus describes the method he has carried out: The patient being anesthetized, a circular incision was made in the conjunctiva, close to the corneal limbus. The internal rectus was dissected free from surrounding tissue up to its attachment to the globe, and held by a pair of advancement forceps, after which it was cut close to the sclera. A double needle catgut suture was passed from within outward, inclosing the central bundle of the tendon, and tied on its external surface. The ends of the suture, which are cut to a generous length, are now laid aside to the nasal side of the field of operation. The external, the superior, and the inferior recti are treated in a similar manner. The oblique muscles are cut, and, no suture being used, escape. The globe is removed after section of the nerves, and all capillary hemorrhage stopped before proceeding. The glass sphere is now placed into the cavity

previously occupied by the eyeball, and now lined with the parietal and a portion of the visceral layer of Tenon's capsule. The sutures holding the externus and the internus are now taken by the operator, the assistant taking at the same time the sutures retaining the superior and inferior recti. Before the second turn is made in the sutures held by the operator the assistant ties his sutures together, and these are inclosed in the final turn of the knot holding the external and internal recti. The sutures are now inclosed in a common knot at their intersection. This process of tying the sutures is of vital importance. In the first place, should the sutures slip over the glass sphere—the horizontal up or down, the vertical in or out—it would escape from the cavity as placed, and put all of the strain upon the light silk sutures in the conjunctival wound. Moreover, should the suture slip, the normal position of the muscles—as retained by this method—upon the glass ball is disturbed, and a condition of unequal tension results, which destroys the proper movements of the artificial bulb. This is a point in the operation which the author lays stress upon—that is, the careful adaptation of the sutures, so that the tendons assume the same position they occupied in the living eye. By attention to this point, which is obtained by the method of tying the sutures, the excursions of the artificial ball are as unrestricted as in Mules' operation. The muscles are retained in their place by a process of adhesive inflammation to the overlying and surrounding conjunctiva, which is completed before the sutures are absorbed. It must be clearly understood that the tendons are not sutured together, but merely held in a normal position until retained by the inflammatory process. The catgut sutures and sphere are now covered by the conjunctiva, which is held by interrupted sutures of Chinese silk. Some finely-powdered iodoform is dusted into the cul-de-sac, and a bandage is applied and allowed to remain for three days. It is interesting to note that the reaction which followed in this opera-

tion was very slight, and caused the patient no pain or elevation of temperature. The ball was not sensitive, and at the end of three weeks the patient wore the artificial eye with comfort. Morton thinks the operation applicable in cases where the eye is atrophic and obviously unfit for a glass sphere; secondly, in cases where the tunics are badly lacerated from severe injury. As in Mules' operation, so here the artificial ball, by holding the prothesis closer to the inner canthus and puncta, permits the tears to drain away almost as perfectly as in the normal eye.

—N. Y. Med. Jour.

ULCERATION OF WOMB AND CERVIX.

Miss C— G—, New York; American; age 24; admitted September 10, 1897; examination revealing severe ulcerative endometritis, accompanied by profuse leucorrhoea of the most fetid character. On the cervix, posteriorly, grew a polypus as large as an English walnut or Madeira nut. The condition was of two years' standing, during which time it had been under constant treatment by a succession of physicians, had been twice curetted, but in spite of all efforts had gradually grown worse. There had been no menses for the last six months; but when they were due, she suffered severe neuralgic pain, confined to the ovaries. I determined that a thorough curettement was necessary, but thought it wise to prepare the patient, as she was in a very run down condition, with a regimen of bovine, a teaspoonful in milk, grape juice, old port wine and beer, alternately, every two hours. She was put to bed on the 11th and hot douches of Thiersch, four quarts, were ordered night and morning. The following day, a bovine tampon was applied well back in the cul de sac of Douglas, as there was a slight misplacement. On the 16th, the polypus was removed by torsion, the surface exposed was touched up with 25 per cent. pyrozone, and an iodoform-bovine tampon was applied. (That surface was completely healed by the 26th.) On the 25th

I thoroughly curetted the uterus and cervix; removing, together with the granulations, two smaller polypi of the size of hazel nuts. The bovine-peroxide reaction was then applied by injection into the uterus, and the product washed out as usual with Thiersch solution. The womb was then packed with bovine gauze, prepared in the following manner: Narrow strips of bi-sterilized gauze a yard long were dipped in bovine, wrung out and packed into the uterine cavity; a bovine tampon was inserted, and a napkin and T-bandage applied. This treatment and dressing were repeated on the 27th and 28th. Menstruation being due on the 30th, I decided not to remove the packing again until that date, in the hope that the flow would come on and carry it away by mechanical force. In this I was not disappointed—the patient having from the beginning continued taking a teaspoonful of bovine every two hours. About 4 P. M. on September 30th menstruation appeared fully and freely, without any pain whatever, and lasted until October 3d. On the 4th, examination found the mucous membrane lining the vagina thoroughly anaemic, and I therefore determined to employ local feeding, as well as support to the womb, which is necessary after all cases of curettement. Bovine tampons were applied daily until the 12th, and every other day thereafter until November 1st.

It should have been mentioned that on September 23 the initial lesion of syphilis appeared on the right labium major, ran on to its full development, and on October 14th secondary symptoms began to appear; eruption, falling out of hair, sore throat and pains in bones. For this condition, besides the bovine, one-fourth of a grain of merc. biniodide had been given three times a day; this being continued until November 22d, when the eruption was fading and the general condition was good.

November 1st the bovine had been increased to a tablespoonful every three hours. On the 14th the bovine tamponing was changed from every other day to twice a week. The condition of the uterus

and cervix was now entirely well; the mucous membrane of the vagina was much improved, but was still decidedly anaemic; consequently the womb and vagina were thoroughly sprayed with bovine every night until December 10. After this date a tampon was applied daily, of boroglycerol, glycerine and alum when the patient was allowed to go out walking, in order to support the womb and to contract the surrounding tissues, which had become more or less relaxed. December 15th the eruption had entirely disappeared, as well as all other syphilitic symptoms. The patient was, however, impressed with the necessity of keeping up anti-syphilitic treatment for at least two years.

December 22 the patient was discharged, absolutely cured of uterine trouble, with instructions to continue bovine, a teaspoonful every three hours, in milk, grape juice, or old port wine; also one-fourth grain protiodide of mercury every three hours; and to report at regular intervals.

ASTHMA TREATED BY ANTI-DIPHTHERIA SERUM.

L. Revilloid was induced to try anti-diphtheria serum in the treatment of true spasmodic asthma (asthma from organic chest lesions or nasal polypi, etc., is not included in this) by the following considerations: (1) An asthmatic attack is probably an attempt to eliminate by the respiratory passages a volatile poison, which is at the same time the cause of the attack. (2) The classical drug for asthma, namely, iodide of potassium, is excreted by the respiratory tract, and probably acts by facilitating gaseous excretion, and rendering unnecessary the asthmatic dyspnea. (3) Anti-diphtheria serum, apart from its specific action on the diphtheria toxins, is excreted by the respiratory tract, as shown by its effect in loosening the false membranes. An outward excretory current is thus set up, and the vitality of the mucosa modified, just as is the case with iodide and chlorate of potassium. (4) Iodides, anti-diphtheria serum, and asthma have this in

common—that they all frequently produce rashes, which shows that the skin as well as the lungs is an excretory channel. (5) This treatment need not violate the fundamental doctrine of serumtherapy. For diseases apparently different may be allied in one or more points, and thus it is that quinine cures other diseases than malaria, mercury than syphilis, and that chlorate of potassium acts as well in ulcerative as in mercurial stomatitis. In accordance with this Revilloid finds that antidiphtheria serum has an action as brilliant in streptococcic as in diphtheritic angina. Seven cases of asthma were thus treated, with the following results: (1) Three cured; (a) male, aged 24; asthmatic attacks every night for six years; respiration always noisy and shallow; numberless methods of treatment without result; complete cure after ten injections of 10 c. cm. of Roux's serum spread over five months. No relapse when seen six and a half months later. (b) Female, aged 40, rheumatic subject, asthmatic attacks every night for seven months; other treatment without effect; cured by three injections of 10 c. cm. of the serum in ten days, and remained quite well when seen five months later. (c) male, aged 36; asthmatic and short of breath since bronchitis eight years ago; for last month attacks every evening between five and eleven, and at other times if fatigued, etc.; other treatment unavailing; cured by six serum injections in two months. (2) One permanently relieved; male, aged 56; asthma 44 years; three injections in ten days. (3) Three cases temporarily relieved, but the treatment was not always persevered in. The injections cause at first the attacks to be less severe, then at greater intervals. An injection was usually given whenever an attack threatened.

—Rev. Med. de la Suisse Rom.

ARECOLINE AS A MYOTIC.

Bietti has been investigating the action of this alkaloid obtained from areca or betel nut. A one per cent. solution instilled into the conjunctival sac causes some burning and

lachrymation and hyperemia. After four or five minutes the pupil begins to contract, maximal contraction being reached in about twelve minutes; this lasts a quarter of an hour, after which the pupil regains its normal size in about two hours, or three hours if a two per cent. hydrobromate solution is used. At the third minute the ciliary muscle begins to contract, as shown by approximation of the near point; this goes on to a maximum till the tenth or twelfth minute, after which the near point recedes to its normal position in the course of forty or fifty minutes. Cocaine in four per cent. solution does not hinder the action of arecoline on the pupil. Arecoline is unable to overcome the mydriatic action of atropine or scopolamine. In the case of a woman with simple glaucoma in both eyes arecoline produced contraction of the pupil where one per cent. eserine failed. It would appear to act more promptly and more energetically than eserine, but its duration of action is less.

—Archivis di Ottalmologia.

OLIVE OIL IN HEPATIC COLIC.

Barth reports the successful result of the administration of large amounts of olive oil in two cases of hepatic colic with icterus, caused by incarcerated gallstones. In one case 200 grams were taken every other day, and in the other 150 grams each day, the taste improved by a few drops of essence of anise. Part of the oil was found in the feces in a saponified condition, in the shape of small green particles which were at first erroneously supposed to be fragments of the gallstones. The rest was split into stearic acid and glycerin. The oil, besides lubricating the mucous surfaces and thus facilitating the expulsion of the stones, excites powerfully the secretion of bile, which flushes the biliary passages and removes particles that might ultimately develop into stones. On account of the increased secretion of bile, oil affects the system injuriously in adhesive cholecystitis, and it is also useless in dilatation and ascending suppurating infection of the biliary passages, and even injurious on account of the impaired

digestion and extra work forced on the liver.—*Semaine Med.*, Dec. 1, 1897.

PROLAPSUS OF THE FEMALE URETHRA.

This trouble is rare (100 to 120 cases on record). It sometimes occurs during a coughing paroxysm in pertussis. Various methods of treatment have been devised, but the use of the knife is frequently followed by stenosis, and by death in one case. Emmet's "buttonhole" is not advisable on account of the fistula left and the double operation. Kleinwächter's method of slitting the urethra and suturing the beginning of the prolapsus to the base, is only applicable to partial inversion, but Israel's method is effective, simple and permanent in its results, as Wohlgemuth has confirmed recently, describing his experience with it in the *Deutsche Med. Woch.* of November 4. The protruding mucous surface is cauterized in narcosis with the Paquelin in a radiating series of burnt stripes lengthwise of the urethra, through the entire thickness of the mucosa. The cicatricial contraction that results puts an end to the prolapsus. Two applications were necessary.

DEEP INCISION OF CERVIX IN LABOR

Barkman published last year an important report, in the Bohemian language, on the results of this practice, after Skutsch and Duhrssen, in the Prague Maternity School. In 3855 labors (1892-95) incision was practiced twenty-four times, namely, one incision in one case, two incisions in eight cases, three in nine, and four in six. In eleven cases the incisions were sutured after labor, seven uniting down to the edge of the external os by first intention. The indications for incisions were: prolapse of cord, three cases; eclampsia, three; dangers threatening fetus, seventeen; cancer of the portio, one. Delivery was completed by symphysiotomy and forceps in three cases, by the forceps alone, fourteen; by turning and extraction, five, and by perforation and cranioclasty in two.

The presentation was: vertex, twenty-one; face, one; brow, one, and transverse, one. The pelvis was capacious in nine cases, and contracted more or less in fifteen. In three cases the incisions were enlarged by laceration, in three they bled severely, the hemorrhage required the tampon in one of these cases, and was checked by suture in the others. In several cases median incisions were made into the vagina and perineum. Of the children, fourteen were born active, and eight in suspended animation (six saved), whilst the remaining two were the cranioclasty cases. The puerperium was normal in seventeen of the patients; in three there was a slight rise of temperature, in two parametritis, in one mastitis, and in one endometritis, salpingitis, peritonitis and fatal sepsis. This patient was mentally afflicted and very uncleanly; there was strong evidence that the artificial incisions were not the channels of infection.

—*Centralbl. f. Gynak.*

SERUMTHERAPY IN PUERPERAL SEPTICEMIA.

Wallich concludes an important report, as follows: (1) From an experimental point of view, employing Marmorek serum on animals inoculated (in their blood) with streptococci derived from puerperal infection, Wallich has not obtained regularly either preventive or curative results, especially with the serum used on women in 1896. (2) From a clinical aspect, Wallich fails to find sufficient modification in septicemia morbidity and mortality in the Baudelocque clinic in 1896 to justify any definite conclusion. Marmorek serum was there employed most methodically. A much longer experience is required. The value of preventive serumtherapy is absolutely unknown. Therefore intra-uterine treatment, which has been well tried, must not be cast aside in favor of curative serumtherapy by antistreptococcic serum. The bacteriologic diagnosis of puerperal infection is as yet hard to make in any clinical fashion.

—*Annales de Gynecologic et d'Obstetrique.*

NOTICE.

An Army Medical Board will be in session at Washington City, D. C., during the month of May for the examination of candidates for appointment to the Medical Corps of the United States Army, to fill existing vacancies.

Persons desiring to present themselves for examination by the Board will make application to the Secretary of War before April 15, 1898, for the necessary invitation, giving the date and place of birth, the place and State of permanent residence, the fact of American citizenship, the name of the medical college from which they were graduated, and a record of service in hospital, if any, from the authorities thereof. The application should be accompanied by certificates based on personal acquaintance, from at least two reputable persons, as to his citizenship, character and habits. The candidate must be between 22 and 29 years of age and a graduate from a regular medical college, as evidence of which his diploma must be submitted to the Board.

Successful candidates at the coming examination will be given a course of instruction at the next session of the Army Medical School, beginning in November, 1898.

Further information regarding the examinations may be obtained by addressing the Surgeon General, U. S. Army, Washington, D. C.

GEO. M. STERNBERG,
Surgeon General, U. S. Army.

To illustrate the general character of written questions submitted to candidates under examination, a few examples from the records of an Army Medical Board recently convened are hereto appended.

EXAMPLES OF WRITTEN QUESTIONS.

ARITHMETIC.

1. Divide 15 by 1-15. Multiply quotient by 1-45, and subtract 25-42 from the product.
2. Multiply .009 by 90. Divide .009 by 90.
3. A garrison of 450 soldiers have

rations for five months only. How many should be detached to make the rations last nine months?

4. Give the metric equivalent of 3 grains; 3 fluidrachms; 3 pounds; 3 quarts; 3 yards.

5. Name and describe briefly four principal kinds of triangles.

6. Which is the larger and by how much, a box 10x8x6 feet or a cube of 8 feet.

GEOGRAPHY.

1. Bound the State of Tennessee. What are its principal rivers? Name its capital and its largest cities.

2. Through what States does the Appalachian chain of mountains extend? What and where are the highest elevations?

3. In going from Duluth to Quebec by water, through what lakes and river and canals, and by what States would you pass?

4. What rivers form the principal drainage system of the United States and into what bodies of water do they flow?

5. What countries border on the Mediterranean Sea?

6. Where is India? How is it governed? Name its principal rivers and cities.

HISTORY AND LITERATURE.

1. Who was Julius Caesar? When, approximately, did he live? For what was he distinguished?

2. What was Queen Elizabeth's claim to the throne of England? About when did she live? Mention the most important events and writers of her reign.

3. What nations made the earliest settlements in North America, and where were they located?

4. What were the more important incidents in the career of Benjamin Franklin? When, approximately, did he live?

5. What historians has the United States produced? Mention at least one work of each.

6. Who were the authors of the following works: Don Quixote? Faust? Les Miserables? The Inferno? Childe Harold's Pilgrimage? Paradise Lost? Evangeline? Scarlet Letter? The Autocrat of the Breakfast Table? The Spy? Legend of Sleepy Hollow?

CHEMISTRY.

1. How may hydrogen be obtained? State its color and odor, and its weight as compared with an equal volume of atmospheric air under similar conditions. What is meant by "similar conditions" in the last sentence?

2. How would you obtain a jarful of carbon dioxide for experimental purposes? How would you recognize that the jar contained carbon dioxide? What is its chemical formula?—its molecular weight?

3. What is that which is known popularly under the name of "laughing gas"? What is its formula? How is it prepared?

4. What is an anhydride? Give the names and chemical formulas of two anhydrides?

5. How is sal ammoniac prepared commercially?

6. What chemical action takes place when copper turnings are heated with sulphuric acid?

7. What are the principal ores of zinc? What is the formula for zinc chloride? for zinc sulphate?

8. What is glycerin chemically?

9. Explain the chemical action which takes place when gunpowder is exploded.

PHYSICS.

1. Does a given body weigh more near the poles of the earth or near the equator? Give an explanation of the fact.

2. Explain the principle of the hydraulic press.

3. What is meant by a compensating pendulum?

4. What is the dew point? How may it be determined?

5. What are the dark lines of the solar spectrum occasioned by?

6. An observer saw the flash of an explosion, and ten seconds later the sound reached his ears. What was his distance approximately from the locality of the explosion?

7. Describe a cell of an electric battery.

ANATOMY.

1. Describe the origin, insertion and action of the several muscles attached to the scapula.

2. Describe the origin, course, branches, distribution and relations

to other organs of the nerves of the arm and forearm.

3. Describe the anatomy of the palm of the hand.

4. Describe the origin, course, branches, distribution and relation to other organs of the internal pudic artery.

5. Describe the anatomy of the ankle joint.

PHYSIOLOGY.

1. Tell what you know about the cerebral localization of the functions of motion, and locate some of the so-called motor areas.

2. What are the functions of the thyroid gland and the consequences of its removal?

3. What is the composition of atmospheric air and of expired air?

4. Give a list and a short description of some of the animal albuminoids.

5. What is urea? What is the normal quantity in proportion to body weight? How is it estimated?

SURGERY.

1. Give in detail the preparatory and several following steps of a so-called aseptic surgical operation.

2. What is the nature and origin of pus? What is sepsis and also antisepsis?

3. Describe Chopart's amputation through the foot, with diagram.

4. Give the points of diagnostic differentiation in cases of lupus ulceration, syphilitic ulceration and epitheliomatous ulceration.

5. Describe the different methods of procedure for the reduction of luxations of the head of the femur.

HYGIENE.

1. What is the normal amount of CO₂ in the atmosphere; how much of this gas is considered admissible in inhabited apartments, and how is the amount determined?

2. What amount of cubic-air space per bed would you consider a suitable allowance in a hospital ward?

3. What substances in well or river water indicate, by their presence, contamination from excreta or other organic matter of animal origin?

4. How is the hardness of water estimated, and to what is it due?

5. What are the constituent alimentary substances in milk, and how

does cow's milk differ from human milk?

6. What vegetable products used as food contain the largest proportion of carbo-hydrates and what the largest proportion of proteids?

7. What parasites dangerous to man may be present in the flesh of animals used as food?

8. How would you disinfect the excreta of patients sick with cholera or typhoid fever?

PATHOLOGY AND BACTERIOLOGY.

1. What are the different stages of exudative inflammation and what the products of such inflammation?

2. What are the causes of thrombosis, what the composition and varieties of thrombi, and what changes may they undergo?

3. What pathological changes are found in the spinal cord in posterior spinal sclerosis?

4. What changes occur in the liver as a result of chronic interstitial hepatitis?

5. What bacteria are commonly found attached to the diseased valves in mycotic endocarditis?

6. What are the morphological and biological characters of the bacillus of diphtheria, and what are the evidences of its etiological relation to this disease?

THERAPEUTICS, MATERIA MEDICA, TOXICOLOGY.

1. By what various agents may antipyresis be produced? Give an example of each class of antipyretics and state how it acts.

2. In a case of typical acute pleurisy state the indications for treatment in its several stages and how you would meet them.

3. What is salol? Give its physiological action and therapeutic uses.

4. Give the source and therapeutic uses of cocaine, the dose in each case, and its dangerous effects.

5. With what condition is poisoning from opium most likely to be confounded? How would you make

a diagnosis and how treat such a case?

6. What are the poisonous effects of the lead salts? How is their presence detected? State briefly your plan of treatment.

PRACTICE OF MEDICINE.

1. Give an account of the etiology, symptoms, physical signs and differential diagnosis of lobular pneumonia.

2. Give an account of the etiology, physical signs and treatment of empyema.

3. Give an account of the etiology, symptoms, differential diagnosis and treatment of dilatation of the stomach.

4. What are the causes and symptoms of intestinal obstruction and what is the treatment?

5. What are the causes and results of mitral stenosis and how would you recognize this condition?

6. Give the differential diagnosis between small-pox and measles.

OBSTETRICS AND DISEASES OF WOMEN AND CHILDREN.

1. Describe briefly the usual mechanism of a breech presentation; what dangers are to be guarded against and what difficulties to be met?

2. Under what circumstances is premature delivery demanded, and how would you perform it?

3. What symptoms would lead you to suspect the presence of a uterine fibroid? State how an exact diagnosis can be made in such cases.

4. What measures preventive or remedial would you use in a case of puerperal convulsions?

5. What early symptoms indicate probable onset of the chief eruptive fevers in children? In which does temperature range highest, which has the shortest period of incubation, of invasion, or eruption?

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Miscellany.

MEETING OF AMERICAN MEDICAL PUBLISHERS' ASSOCIATION.

The fifth annual meeting of the American Medical Publishers' Association will be held in Denver on Monday, June 6, 1898, the day preceding the meeting of the American Medical Association. Editors and publishers, as well as every one interested in medical journalism, cordially invited to attend and participate in the deliberations. Several very excellent papers are already assured, but more are desired. In order to secure a place on the programme, contributors should send titles of their papers at once to the secretary, Charles Wood Fassett, St. Joseph, Mo.

The Japanese minister to the United States was instructed weeks ago to obtain the best artificial limb in this country for Count Okuma, and he turned the order over to the Secretary of the Legation, who instructed Consul-General Uchida to consummate the negotiations. The latter gave an order to the firm of A. A. Marks, 701 Broadway, N. Y.

This is the second wooden leg that the prime minister has purchased in this country, and the fact appears to be a refutation of the political "roor-back" that Japan is interfering with our commerce and manufactures. In 1890 a Japanese fanatic, Hunekt Karushima, threw a bomb into the foreign office, where Count Okuma was at work, and he lost his right nether limb. A local cabinetmaker of high degree furnished him an artificial limb that was finely lacquered and inlaid with mother-of-pearl, but which had not the grace and comfort of the Yankee invention. So when Count Okuma came to this country, in 1894, he purchased a leg of American make, and left the other behind. Several months ago Count Okuma had his Yankee leg shattered

in a runaway accident, the cabinet-maker was sent for again, and another lacquered and mother-of-pearl leg was furnished the Prime Minister until he could get a new leg from A. A. Marks, 5200 miles away. The Count is to get it in about a month. This most excellent firm above is not only the oldest of importance in America, but for many years their workmanship has been sought from Europe, Asia and Africa.

—The North American Medical Review.

INCARCERATED RETROPERITONEAL HERNIA.

Schultze (Deut. Zeit. fur. Chir., Band xlv Heft 3 u. 4) reports an interesting case of retroperitoneal hernia which simulated in a marked manner incarcerated inguinal hernia.

The patient, when first seen, had a marked swelling in the inguinoscrotal region and symptoms of intestinal occlusion. The swelling, however, disappeared to a great extent upon the application of cold. There persisted, however, a swelling in the inguinal lymphatic glands of the right side which were not present on the left. The persistence of the symptoms of obstruction with the presence of these glands, as formerly noted by Rose, led the author to a diagnosis of an internal incarcerated hernia on the right side. There was a marked induration at a point just above Poupart's ligament about its middle. This and the presence of vomiting, distention of the abdomen and absence of stools led the author to operate. The operation disclosed a retroperitoneal pocket with a sharp upper edge, which was about the size of a walnut; it was filled by a knuckle of small intestine. The intestine was distended above and flattened below, while the strangulated portion was markedly discolored, but not sufficiently so to necessitate resection. The recovery was complete, though retarded by slight supuration about the catgut sutures.

THE UNION OF REIMPLANTED BONE BUTTONS AFTER TREPHINING.

By a carefully conducted series of experiments David (Archiv. fur klin. Chir., 1896, Band liii, Heft 4) has proved that the buttons of bone which have been entirely removed from the skull unite when reimplanted under aseptic conditions in a manner analogous to the reparative action seen in other tissues, and that there is neither an entire new formation of bone nor any necrosis of the implanted fragment.

These results were obtained by operating upon a series of dogs which were killed at regular intervals of one week, from four days to 14 weeks after the operations had been performed. He thus secured a series of histological specimens which clearly demonstrated the fact related and that the process of repair was a normal aseptic union between the fragment of bone and the remainder of the skull, and that there was no absorption or necrosis of the fragment, but that it remained intact and became united to the other bone.

Dr. Nicholas Senn, of Chicago, was lately taken to Galena, in care of a Sheriff, to answer to the charge of contempt of Court. As it turned out that his evidence was immaterial to the case, where he refused to appear, and as the Judge found he was a very busy man, having much more important duties than the neglected one pressing upon him, he was forgiven by the Court.

N. Y. Med. Rec.

A SAFE ANTI-RHEUMATIC.

Safety and efficiency are qualities not combined in the anti-rheumatics heretofore in use. While no one questions the efficacy of salicylic acid and its salts in rheumatic affections, every one recognizes the difficulty of employing it in certain cases owing to its irritating effects upon the stomach, its tendency to produce unpleasant and even serious disturbances of the nervous system and its weakening effects upon the heart. As recently pointed out by Dr. Baque in an inaugural dissertation (Paris, 1897), salophen exerts an

incontestably favorable influence in acute and subacute articular rheumatism, while possessing the great advantage over sodium salicylate of being devoid of all unpleasant after-effects such as headaches, vertigo, and tinnitus aurium. As salophen is decomposed in the intestine, it does not provoke gastric disturbances—another advantage over the salicylate. It also possesses a marked analgesic action, and therefore is entitled to a prominent position in the treatment of the various algias, cephalalgia, migraine, sciatica, etc. It also appears to have a beneficial influence in various cutaneous affections, especially those attended with pruritus. Finally, Baque concludes his enumeration of the many desirable qualities of salophen with the statement that owing to its freedom from taste and odor it can be readily administered—a quality that deserves the more consideration since in many rheumatic cases the existing gastric disturbances render it very difficult to administer other remedies.

GLYCERINE IN AFFECTIONS OF THE STOMACH.

Some years ago Dr. Sydney Ringer recommended the administration of glycerine by the mouth in certain affections of the stomach. Acting upon his suggestion, Sir James Sawyer has since treated many cases of painful gastric digestion such as are usually attributed to subacute or chronic catarrh of the gastric mucous membrane, with glycerine, and with satisfactory results. He gives one drachm, a drachm and a half and sometimes even two drachms, with a little of some simple stomachic tincture, diluted to an ounce with water, thrice daily, between meals.

—Ex.

The Obstetrical Society of Cincinnati at its annual election chose the following officers: President, Dr. E. S. McKee; vice president, Dr. W. D. Porter; recording secretary, Dr. William Gillespie; corresponding secretary, Dr. M. A. Tate; treasurer, Dr. George E. Jones; librarian, Dr. Bonnisfield.